FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
American Rockwool Manufacturing, LLC

AUTHORIZING THE OPERATION OF
Nolanville Plant

Mineral Wool Manufacturing

LOCATED AT
Bell County, Texas
Latitude 31° 4' 26" Longitude 97° 34' 30"
Regulated Entity Number: RN100215243

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O1134 Issuance Date: _____

_____
For the Commission

Table of Contents

General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

    A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

    B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

    C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

    D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

E. Emission units subject to 40 CFR Part 63, Subpart DDD as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.610 which incorporates the 40 CFR Part 63 Subpart by reference.

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

B. Title 30 TAC § 101.3 (relating to Circumvention)

C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

H. Title 30 TAC § 101.221 (relating to Operational Requirements)

I. Title 30 TAC § 101.222 (relating to Demonstrations)

J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

(i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(1)(E)

(iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)

(iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive

ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

(1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.

(2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

(3) Records of all observations shall be maintained.

(4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity

requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

(c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)

(iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

(1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.

(2) Records of all observations shall be maintained.

(3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to

condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A)

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)

(iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

(1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.

(2) Records of all observations shall be maintained.

(3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's

eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

F. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

(i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

(ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)

(iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

4. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

Additional Monitoring Requirements

5. Unless otherwise specified, the permit holder shall comply with the compliance assurance monitoring requirements as specified in the attached "CAM Summary" upon issuance of the permit. In addition, the permit holder shall comply with the following:

   A. The permit holder shall comply with the terms and conditions contained in 30 TAC § 122.147 (General Terms and Conditions for Compliance Assurance Monitoring).

   B. The permit holder shall report, consistent with the averaging time identified in the "CAM Summary," deviations as defined by the deviation limit in the "CAM Summary." Any monitoring data below a minimum limit or above a maximum limit, that is collected in accordance with the requirements specified in 40 CFR § 64.7(c), shall be reported as a deviation. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

   C. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the "CAM Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances in order to avoid reporting deviations. All monitoring data shall be collected in accordance with the requirements specified in 40 CFR § 64.7(c).

   D. The permit holder shall operate the monitoring, identified in the attached "CAM Summary," in accordance with the provisions of 40 CFR § 64.7.

   E. The permit holder shall comply with either of the following requirements for any particulate matter capture system associated with the control device subject to CAM. If the results of the following inspections indicate that the capture system is not working properly, the permit holder shall promptly take necessary corrective action:

      (i) Once per year the permit holder shall inspect any fan for proper operation and inspect the capture system used in compliance of CAM for cracks, holes, tears, and other defects; or

      (ii) Once per year, the permit holder shall inspect for fugitive emissions escaping from the capture system in compliance of CAM by performing a visible emissions observation for a period of at least six minutes in accordance with 40 CFR Part 60, Appendix A, Test Method 22.

   F. The permit holder shall comply with the requirements of 40 CFR § 70.6(a)(3)(ii)(A) and 30 TAC § 122.144(1)(A)-(F) for documentation of all required inspections.

6. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular

instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

7. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

   A. Are incorporated by reference into this permit as applicable requirements

   B. Shall be located with this operating permit

   C. Are not eligible for a permit shield

8. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

9. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

10. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

11. Use of Discrete Emission Credits to comply with the applicable requirements:

   A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

      (i) Title 30 TAC Chapter 115

      (ii) Title 30 TAC Chapter 117

      (iii) If applicable, offsets for Title 30 TAC Chapter 116

      (iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

(ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

(iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Protection of Stratospheric Ozone

12. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:

A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.

Temporary Fuel Shortages (30 TAC § 112.15)

13. The permit holder shall comply with the following 30 TAC Chapter 112 requirements:

A. Title 30 TAC § 112.15 (relating to Temporary Fuel Shortage Plan Filing Requirements)

B. Title 30 TAC § 112.16(a), (a)(1), and (a)(2)(B) - (C) (relating to Temporary Fuel Shortage Plan Operating Requirements)

C. Title 30 TAC § 112.17 (relating to Temporary Fuel Shortage Plan Notification Procedures)

D. Title 30 TAC § 112.18 (relating to Temporary Fuel Shortage Plan Reporting Requirements)

Permit Location

14. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

15. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GRPCUPOLAS	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	CUP1, CUP2	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GRPCUPOLAS	MISCELLANEOUS UNITS	CUP1, CUP2	63DDD	40 CFR Part 63, Subpart DDD	No changing attributes.
SCRUBBER	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1151	30 TAC Chapter 111, Nonagricultural Processes	No changing attributes.
SCRUBBER	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	111-VENT00020	30 TAC Chapter 111, Visible Emissions	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRPCUPOLAS	EU	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(A) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 30% averaged over a six minute period.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
GRPCUPOLAS	EU	63DDD	PM	40 CFR Part 63, Subpart DDD	§ 63.1178(a)-Table 2.1 § 63.1178(b)(1) § 63.1178(b)(2) § 63.1180(b) [G]§ 63.1184 § 63.1197(a) § 63.1197(b) § 63.1197(c) § 63.1197(d) § 63.1197(e)	Limit emissions of particulate matter (PM) from each cupola commenced construction on or before May 8,1997 to 0.10 lb per ton of melt.	§ 63.1181(a) § 63.1181(b) § 63.1181(c) § 63.1181(d) [G]§ 63.1186 [G]§ 63.1187(b) § 63.1188(a) § 63.1188(b) § 63.1188(c) § 63.1188(d) § 63.1188(f) § 63.1188(g) § 63.1188(h) [G]§ 63.1189 § 63.1190(a)	§ 63.1181(d) § 63.1188(g) § 63.1188(h) § 63.1192(a) § 63.1192(b) § 63.1192(b)(1) § 63.1192(b)(2) § 63.1192(c) § 63.1192(d) § 63.1197(e)	§ 63.1187(a) § 63.1191(a) § 63.1191(a)(2) § 63.1191(d) § 63.1191(e) § 63.1192(e) [G]§ 63.1193
GRPCUPOLAS	EU	63DDD	COS	40 CFR Part 63, Subpart DDD	§ 63.1178(a)-Table 2.7 § 63.1180(b) § 63.1197(a) § 63.1197(b) § 63.1197(c) § 63.1197(d) § 63.1197(e)	Limit emissions of carbonyl sulfide (COS) from each open-top cupola commenced construction on or before November 25, 2011 to 6.8 lb per ton of melt.	[G]§ 63.1186 [G]§ 63.1187(b) § 63.1188(a) § 63.1188(b) § 63.1188(c) § 63.1188(d) § 63.1188(f) § 63.1188(g) § 63.1188(h) [G]§ 63.1189 § 63.1190(b)	§ 63.1188(g) § 63.1188(h) § 63.1192(a) § 63.1192(b) § 63.1192(b)(1) § 63.1192(c) § 63.1192(d) § 63.1197(e)	§ 63.1187(a) § 63.1191(a) § 63.1191(a)(2) § 63.1191(d) § 63.1191(e) § 63.1192(e) [G]§ 63.1193
GRPCUPOLAS	EU	63DDD	HF	40 CFR Part 63, Subpart DDD	§ 63.1178(a)-Table 2.9 § 63.1180(b) § 63.1197(a) § 63.1197(b) § 63.1197(c) § 63.1197(d)	Limit emissions of hydrogen fluoride (HF) from each cupola that uses slag as a raw material and commenced construction on or before November 25, 2011 to 0.16 lb per ton of	[G]§ 63.1186 [G]§ 63.1187(b) § 63.1188(a) § 63.1188(b) § 63.1188(c) § 63.1188(d) § 63.1188(f)	§ 63.1188(g) § 63.1188(h) § 63.1192(a) § 63.1192(b) § 63.1192(b)(1) § 63.1192(c) § 63.1192(d)	§ 63.1187(a) § 63.1191(a) § 63.1191(a)(2) § 63.1191(d) § 63.1191(e) § 63.1192(e) [G]§ 63.1193

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.1197(e)	melt.	§ 63.1188(g) § 63.1188(h) [G]§ 63.1189 § 63.1190(b)	§ 63.1197(e)	
GRPCUPOLAS	EU	63DDD	HCL	40 CFR Part 63, Subpart DDD	§ 63.1178(a)-Table 2.9 § 63.1180(b) [G]§ 63.1184 § 63.1197(a) § 63.1197(b) § 63.1197(c) § 63.1197(d) § 63.1197(e)	Limit emissions of hydrogen chloride (HCl) from each cupola that uses slag as a raw material and commenced construction on or before November 25, 2011 to 0.44 lb per ton of melt.	[G]§ 63.1186 [G]§ 63.1187(b) § 63.1188(a) § 63.1188(b) § 63.1188(c) § 63.1188(d) § 63.1188(f) § 63.1188(g) § 63.1188(h) [G]§ 63.1189 § 63.1190(b)	§ 63.1188(g) § 63.1188(h) § 63.1192(a) § 63.1192(b) § 63.1192(b)(1) § 63.1192(c) § 63.1192(d) § 63.1197(e)	§ 63.1187(a) § 63.1191(a) § 63.1191(a)(2) § 63.1191(d) § 63.1191(e) § 63.1192(e) [G]§ 63.1193
SCRUBBER	EP	R1151	PM	30 TAC Chapter 111, Nonagricultural Processes	§ 111.151(a) § 111.151(b) § 111.151(c)	No person may cause, suffer, allow, or permit emissions of particulate matter from any source to exceed the allowable rates specified in Table 1 as follows, except as provided by §111.153 of this title (relating to Emissions Limits for Steam Generators).	** See CAM Summary	None	None
SCRUBBER	EP	111-VENT00020	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See CAM Summary	None	None

Additional Monitoring Requirements

CAM Summary

Unit/Group/Process Information	
ID No.: SCRUBBER	
Control Device ID No.: SCRUBBER	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: 111-VENT00020
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Liquid Flow Rate	
Minimum Frequency: Once per day	
Averaging Period: n/a	
Deviation Limit: Minimum Liquid Flow Rate = 245 gal/min	
CAM Text: Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following: ± 2% of span; or ± 5% of design liquid flow rate.	

CAM Summary

Unit/Group/Process Information	
ID No.: SCRUBBER	
Control Device ID No.: SCRUBBER	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: 111-VENT00020
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visual Inspection of Spray System	
Minimum Frequency: Once per day	
Averaging Period: n/a	
Deviation Limit: Any not thoroughly distributed spray pattern needs to be corrected within 72 hours of observation.	
CAM Text: Results of daily visual inspections will be maintained in a written log. The inspection procedures will be re-evaluated any time the scrubber system is modified to ensure that the inspections remain effective indicators of scrubber performance. If the observations cannot be safely conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. Personnel that will perform visual inspections of the spray system will receive initial training on acceptable spray pattern and corrective actions should they observe an unacceptable spray pattern. Corrective actions could include cleaning debris from the scrubber, cleaning clogged nozzles, replacing worn or inoperative nozzles, cleaning/replacing piping, or other appropriate actions. Measurement devices will be located and installed and visual inspections shall be taken from a vantage point such that representative data is obtained. Prior to the first liquid flow measurements, the permit holder will verify the measurement equipment in general accordance with the manufacturer's recommended installation, calibration, and start-up procedures.	

CAM Summary

Unit/Group/Process Information	
ID No.: SCRUBBER	
Control Device ID No.: SCRUBBER	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Nonagricultural Processes	SOP Index No.: R1151
Pollutant: PM	Main Standard: § 111.151(a)
Monitoring Information	
Indicator: Liquid Flow Rate	
Minimum Frequency: Once per day	
Averaging Period: n/a	
Deviation Limit: Minimum Liquid Flow Rate = 245 gal/min	
CAM Text: Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following: ± 2% of span; or ± 5% of design liquid flow rate.	

CAM Summary

Unit/Group/Process Information	
ID No.: SCRUBBER	
Control Device ID No.: SCRUBBER	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Nonagricultural Processes	SOP Index No.: R1151
Pollutant: PM	Main Standard: § 111.151(a)
Monitoring Information	
Indicator: Visual Inspection of Spray System	
Minimum Frequency: once per day	
Averaging Period: n/a	
Deviation Limit: Any not thoroughly distributed spray pattern needs to be corrected within 72 hours of observation.	
CAM Text: Results of daily visual inspections will be maintained in a written log. The inspection procedures will be re-evaluated any time the scrubber system is modified to ensure that the inspections remain effective indicators of scrubber performance. If the observations cannot be safely conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. Personnel that will perform visual inspections of the spray system will receive initial training on acceptable spray pattern and corrective actions should they observe an unacceptable spray pattern. Corrective actions could include cleaning debris from the scrubber, cleaning clogged nozzles, replacing worn or inoperative nozzles, cleaning/replacing piping, or other appropriate actions. Prior to the first liquid flow measurements, the permit holder will verify the measurement equipment in general accordance with the manufacturer's recommended installation, calibration, and start-up procedures.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPCUPOLAS	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(A)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: once per quarter	
Averaging Period: n/a	
Deviation Limit: If opacity is greater than 30%, the permit holder shall report a deviation.	
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit is the corresponding opacity limit associated with the particulate matter standard in the underlying applicable requirement. If there is no corresponding opacity limit in the underlying applicable requirement, the maximum opacity will be established using the most recent performance test. If the result of the Test Method 9 is opacity above the corresponding opacity limit (associated with the particulate matter standard in the underlying applicable requirement or as identified as a result of a previous performance test to establish the maximum opacity limit), the permit holder shall report a deviation.	

Permit Shield

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
GRPBLTCNV	BINCONVYR, RADIALSTKR, RRCONVYR, SCRCONVYR, SHOTCONVYR	40 CFR Part 60, Subpart OOO	Stand-alone screening operations at a plant without crushers or grinding mills
GRPOILTANK	OILTANK 1, OILTANK 2	30 TAC Chapter 115, Storage of VOCs	Facility is located in Bell County and transfers only non-gasoline VOC
GRPOILTANK	OILTANK 1, OILTANK 2	40 CFR Part 60, Subpart K	Capacity < 40,000 gal
GRPOILTANK	OILTANK 1, OILTANK 2	40 CFR Part 60, Subpart Ka	Capacity < 40,000 gal
GRPOILTANK	OILTANK 1, OILTANK 2	40 CFR Part 60, Subpart Kb	Capacity < 40m3
GRPOILTANK	OILTANK 1, OILTANK 2	40 CFR Part 60, Subpart UU	Not an asphalt plant
GRPOILTANK	OILTANK 1, OILTANK 2	40 CFR Part 63, Subpart EEEE	Tufflo Oil stored at the facility does not meet the definition of an “organic liquid” per 40 CFR 63.2406. Tufflo Oil is a non-crude oil liquid with a vapor pressure less than 0.0013 kilopascals; therefore, this subpart is not applicable.
GRPOILTANK	OILTANK 1, OILTANK 2	40 CFR Part 63, Subpart R	Not a bulk gasoline terminal
HANDLINGFB	N/A	40 CFR Part 60, Subpart OOO	Stand-alone screening operations at a plant without crushers or grinding mills
HANDLINGSC	N/A	40 CFR Part 60, Subpart OOO	Stand-alone screening operations at a plant without crushers or grinding mills
SHOTSC	N/A	40 CFR Part 60, Subpart OOO	Stand-alone screening operations at a plant without crushers or grinding mills

New Source Review Authorization References

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX625M1	Issuance Date: 01/31/2019
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 9397	Issuance Date: 01/31/2019
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
BINCONVYR	WEIGHT HOPPER FEED BIN CONVEYOR	9397, PSDTX625M1
CUP1	CUPOLA 1	9397, PSDTX625M1
CUP2	CUPOLA 2	9397, PSDTX625M1
HANDLINGFB	RAW MATERIAL AND COKE FEED BINS	9397, PSDTX625M1
HANDLINGSC	SCREENING	9397, PSDTX625M1
OILTANK 1	TUFFLO OIL TANK 1	9397, PSDTX625M1
OILTANK 2	TUFFLO OIL TANK 2	9397, PSDTX625M1
RADIALSTKR	RADIAL STACKER CONVEYOR	9397, PSDTX625M1
RRCONVYR	RAILROAD CAR UNLOADING CONVEYOR	9397, PSDTX625M1
SCRCONVYR	SCREENING FEED CONVEYOR	9397, PSDTX625M1
SCRUBBER	BLOWING AND BAGGING CONTROL DEVICE	9397, PSDTX625M1
SHOTCONVYR	CONVEYOR	106.261/09/04/2000
SHOTSC	SCREEN	106.261/09/04/2000

Appendix A

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
CEMS ..... continuous emissions monitoring system
CFR ..... Code of Federal Regulations
COMS ..... continuous opacity monitoring system
CVS ..... closed vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MACT ..... Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr ..... Million British thermal units per hour
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NESHAP ..... National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PEMS ..... predictive emissions monitoring system
PM ..... particulate matter
ppmv ..... parts per million by volume
PRO ..... process unit
PSD ..... prevention of significant deterioration
psia ..... pounds per square inch absolute
SIP ..... state implementation plan
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Appendix B

Major NSR Summary Table

Permit Number: 9397 and PSDTX256M1					Issuance Date: January 31, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
2	Electric Arc Furnace or Cupola 1 or Cupola 2	PM10	3.24	14.30	2, 3, 11, 12, 14	2, 11, 12, 14, 23	2, 12, 14
		NOx	12.85	52.06	11, 12	11, 12, 23	12
		CO	1477.00	4800.40	6, 11, 12, 13, 15, 16	6, 11, 12, 13, 15, 16, 23	12, 13, 15, 16
		SO2	149.81	487.00	11, 12, 13, 15, 16, 24	11, 12, 13, 15, 16, 23, 24	12, 13, 15, 16
		HF	0.57	2.10	11, 12	11, 12, 23	12
		H2S	15.70	57.60	6, 11, 12, 13	6, 11, 12, 13, 23	12, 13
		COS	19.87	75.82	6, 11, 12, 13	6, 11, 12, 13, 23	12, 13
		TRS	35.57	133.42	6, 11, 12, 15, 16, 24	6, 11, 12, 15, 16, 23, 24	12, 15, 16
		HCN	<0.01	0.03	11, 12	11, 12, 23	12
2	Electric Arc Furnace or Cupola 1 or Cupola 2 (5)	SO2	203.38	-	12	12, 23	12
		TRS	48.29	-	12	12, 23	12
3	Scrubber	PM10	21.20	80.90	3, 12, 14, 17, 19	12, 14, 17, 19, 23	12, 14, 21
		VOC	0.05	0.22	12	12	12
4	Material Handling (Includes Stockpiles)	PM	1.00	0.70	4, 12	8, 12, 23	12
		PM10	0.47	0.38	4, 12	8, 12, 23	12
5	Cupola Building Fugitives	PM10	<0.01	<0.01	4, 5, 12	5, 12, 23	12
		NOx	<0.01	<0.01	5, 12	5, 12, 23	12
		CO	0.15	0.47	5, 6, 12	5, 6, 12, 23	12

Permit Number: 9397 and PSDTX256M1					Issuance Date: January 31, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
5	Cupola Building Fugitives	SO2	<0.01	0.04	5, 12	5, 12, 23	12
		HF	<0.01	<0.01	5, 12	5, 12, 23	12
		H2S	<0.01	<0.01	5, 6, 12	5, 6, 12, 23	12
		COS	<0.01	<0.01	5, 6, 12	5, 6, 12, 23	12
		TRS	<0.01	0.01	5, 6, 12	5, 6, 12, 23	12
		HCN	<0.01	<0.01	5, 12	5, 12, 23	12
6	Oil Storage Tank	VOC	1.82	<0.01	12	12	12

Footnotes:

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code Section 101.1
- PM - total particulate matter, suspended in the atmosphere, including PM10 and PM2.5, as represented
- PM10 - total particulate matter equal to or less than 10 microns in diameter, including PM2.5, as represented
- NOx - total oxides of nitrogen
- CO - carbon monoxide
- SO2 - sulfur dioxide
- HF - hydrogen fluoride
- H2S - hydrogen sulfide
- COS - carbonyl sulfide
- TRS - total reduced sulfur
- HCN - hydrogen cyanide

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) Each cupola is authorized to produce white mineral wool, which uses feldspar instead of trap rock, for a total of 24 hours, for the sole purpose of determining the emission increases, if any, of SO2 and TRS.
(6) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit.
* Emission rates are based on and the facilities are limited by the following maximum operating schedule:
Hrs/day 24 Days/week 7 Weeks/year 52

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 31, 2019

MR JAMES DEIBEL
MANAGER
AMERICAN ROCKWOOL MANUFACTURING LLC
1316 VILLAGE CREEK DR STE 600
PLANO TX 75093-4461

Re: Permit Renewal
Permit Number: 9397
Expiration Date: January 31, 2029
American Rockwool Manufacturing, LLC
Mineral Wool Manufacturing Facility
Nolanville, Bell County
Regulated Entity Number: RN100215243
Customer Reference Number: CN605129857
Associated Permit Number: PSDTX625M1

Dear Mr. Deibel:

This is in response to your application Form PI-1R (General Application for Air Permit Renewals) concerning the proposed renewal of Permit Number 9397. Also, this will acknowledge that your application for the above-referenced renewal is technically complete as of January 15, 2019.

In accordance with Title 30 Texas Administrative Code Section 116.314(a), and based on our review, Permit Number 9397 is hereby renewed. In addition, with this permitting action, Permit by Rule Registration Number 48559 has been voided. Since you certified there were no changes to your existing permit, it is renewed as written and will be in effect for ten years from the date this renewal was issued. Please attach this letter, including the attachment regarding referenced authorizations, and new general conditions (permit face) to your permit. We appreciate your careful review of the special conditions of the permit and assuring that all requirements are consistently met.

You may file a **motion to overturn** with the Chief Clerk. A motion to overturn is a request for the commission to review the executive director's decision. Any motion must explain why the commission should review the executive director's decision. According to 30 TAC Section 50.139, an action by the executive director is not affected by a motion to overturn filed under this section unless expressly ordered by the commission.

A motion to overturn must be received by the Chief Clerk within 23 days after the date of this letter. An original and 7 copies of a motion must be filed with the Chief Clerk in person, or by mail to the Chief Clerk's address on the attached mailing list. On the same day the motion is transmitted to the Chief Clerk, please provide copies to the applicant, the executive director's attorney, and the Public Interest Counsel at the addresses listed on the attached mailing list. If a motion to overturn is not acted on by the commission within 45 days after the date of this letter, then the motion shall be deemed overruled.

You may also request **judicial review** of the executive director's approval. According to Texas Health and Safety Code Section 382.032, a person affected by the executive director's approval must file a petition appealing the executive director's approval in Travis County district court within 30 days after the **effective date of the approval**. Even if you request judicial review, you still must exhaust your

administrative remedies, which includes filing a motion to overturn in accordance with the previous paragraphs.

You are reminded that all maintenance activities at the site are required to be authorized and that each facility at the site must be in compliance with all rules and regulations of the Texas Commission on Environmental Quality (TCEQ) and of the U.S. Environmental Protection Agency at all times.

If you need further information or have any questions, please contact Ms. Anukriti Mahayan at (512) 239-0439 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,

Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

Enclosure

cc: Air Section Manager, Region 9 - Waco

Project Number: 292470

Permit No. 9397 – Authorizations Referenced on January 31, 2019

This list includes authorizations referenced with the renewal of this permit. It is not intended to be all-inclusive and can be altered at the site without modification to the permit.

Facility/Change	Authorization	Registration Number
Mineral Wool Shot Sales Loading Facility (EPN: 4-26-RRCAR)	30 TAC §106.261: Facilities (Emission Limitations) and; 30 TAC §106.262: Facilities (Emission and Distance Limitations)	50933

Texas Commission on Environmental Quality
Air Quality Permit

A Permit Is Hereby Issued To
American Rockwool Manufacturing, LLC
Authorizing the Continued Operation of
Mineral Wool Manufacturing Facility
Located at **Nolanville, Bell County, Texas**
Latitude 31° 4′ 26″ Longitude −97° 34′ 30″

Permit: 9397 and PSDTX625M1

Issuance Date: January 31, 2019

Expiration Date: January 31, 2029

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)] [1]
2. **Voiding of Permit**. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress**. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification**. The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements**. If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours;

keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates**. The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)] [1]
9. **Maintenance of Emission Control**. The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules**. Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit. [1]

[1] Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

Special Conditions

Permit Numbers 9397 and PSDTX625M1

Emission Standards

1. This permit authorizes those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission rates and other conditions specified in the table. In addition, this permit authorizes all emissions from planned startup and shutdown activities associated with facilities or groups of facilities that are authorized by this permit. **(01/13)**

Federal Applicability

2. The plant covered under this permit shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) National Standards for Hazardous Air Pollutants for Source Categories existing for Mineral Wool Production in the Title 40 Code of Federal Regulations (40 CFR) Part 63, Subparts A and DDD. **(8/99)**

Opacity/Visible Emission Limitations

3. In accordance with EPA Test Method 9 or equivalent, and except for those periods described in Title 30 Texas Administrative Code §§ 101.201 and 101.211 (30 TAC §§ 101.201 and 101.211), the opacity of emissions from fabric filter baghouses and scrubbers listed in the permit shall not exceed 10 percent averaged over a six-minute period. **(6/08)**

4. As determined by a trained opacity observer, no visible emissions from material handling operations or from the plant buildings shall leave the plant property boundary. **(10/98)**

Operational Limitations, Work Practices, and Plant Design

5. In order to comply with represented emission limits and off-property impacts, the facility is limited to operating only one cupola at any time after December 28, 1999. Except as provided in Special Condition No. 13, under no circumstances shall both cupolas be operated at the same time after December 28, 1999. **(8/99)**

6. Each cupola shall be fitted with and use an oxygen (O_2) injection system for the purpose of reducing emissions of carbon monoxide (CO) and total reduced sulfur compounds (TRS): hydrogen sulfide (H_2S), carbonyl sulfide (COS), and carbon disulfide. The O_2 injection rate shall be maintained at a minimum flow rate of 38 standard cubic feet per minute during normal cupola operation.

   Normal cupola operation does not include periods of cupola start-up, shutdown, maintenance, or periods when the O2 injection system flow measurement devices are being calibrated. Depending on stack sampling results, the minimum O2 injection rate may be increased in order to ensure that emissions of CO and TRS comply with the emission limitations specified in the maximum allowable emissions rate table (MAERT). **(11/04)**

7. Plant roads, truck load-out areas, and truck trailer parking areas shall be paved or sprinkled with water or chemicals, as necessary, to control dust emissions. Front-end loader traffic areas and material stockpiles shall be sprinkled with water and/or chemicals as necessary to control dust emissions. **(10/98)**

8. The railcar unloading rate shall be limited to 100 tons per hour, based on an eight-hour shift average. A permanent windbreak that partially encloses the railcar unloading system shall be installed and maintained to minimize the generation of windborne particulate emissions. **(10/98)**

9. With the exception of the transfer of material from the baghouse to the shot piles, water sprays shall be installed and operated at the raw material and fuel screens and all material handling transfer points in order to prevent visible emissions. **(10/98)**

10. Dust removed from the cupola baghouse shall be handled and transferred to the slag (shot) pile in a manner that will minimize visible emissions. **(10/98)**

11. The facility shall have a maximum charge rate of 13,700 pounds per hour (lb/hr), based on a daily average, of raw material and recyclable material (shot) to each cupola and a maximum charge rate of 13,700 lb/hr, based on a daily average, of raw and recyclable material (shot) to the electric arc furnace (EAF). **(8/99)**

Initial Determination of Compliance

12. Prior to start-up of the EAF, the holder of this permit shall submit to the TCEQ Executive Director, or his representative, certification documenting that the facilities or facility changes authorized by the permit have been completed as represented in the permit application. **(10/98)**.

13. Upon request of the TCEQ Executive Director the holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the operation of the cupolas and EAF as authorized by this permit. Sampling of the cupolas shall occur subsequent to the use of O2 injection and during a period when the EAF is not operating. Sampling of the EAF shall occur during a period when the cupolas are not operating. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. **(10/98)**

    A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.

       The notice shall include:

       (1) Date for pretest meeting.

       (2) Date sampling will occur.

       (3) Name of firm conducting sampling.

(4) Type of sampling equipment to be used.

(5) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for New Source Performance Standard testing which must have the EPA approval shall be submitted to the TCEQ Austin Compliance Support Division. **(11/04)**

B. Air contaminants emitted from the cupolas to be tested for include (but are not limited to) CO, sulfur dioxide (SO_2), H_2S, and COS. Air contaminants emitted from the EAF to be tested for include (but are not limited to) CO, SO_2, H_2S, and COS.

C. Sampling of the EAF shall occur within 60 days after initial start-up of the EAF. Additional sampling of the EAF and/or cupolas shall occur at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires the EPA approval, and requests shall be submitted to the TCEQ Regional Office.

D. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. The plant shall also document all operational parameters, such as exhaust fan speed, exhaust damper settings, that may affect the exhaust flow from the cupola and EAF stacks. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

E. Three copies of the final sampling report shall be forwarded to the TCEQ within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual.

The sampling report shall also include the following:

(1) Plant production rate during tests.

(2) Fuel type and consumption rates during tests.

(3) Amount and type of raw materials charged to the cupolas and EAF.

(4) Listing and amounts of all air contaminants emitted from the combined stack exhaust from the cupolas and EAF.

(5) Listing and amounts of additives that are introduced into the process either during the combustion stage or treatment of the exhaust matter prior to emitting from this single stack.

(6) Amount of sulfur in raw materials and fuel.

(7) The O_2 injection rates.

The reports shall be distributed as follows:

One copy to the TCEQ Waco Regional Office.
One copy to the EPA Region 6, Air Enforcement Branch, Dallas. **(11/04)**

Continuous Determination of Compliance

14. Upon being informed by the TCEQ Executive Director that the staff has documented visible emissions from these facilities exceeding ten percent opacity (when adjusted for water vapor, averaged over six consecutive minutes) and upon request of the TCEQ, the holder of this permit shall conduct stack sampling analyses to prove satisfactory equipment performance and compliance with the conditions of this permit. Sampling must be conducted in accordance with appropriate procedures of the TCEQ Sampling Procedures Manual or in accordance with applicable EPA Code of Federal Regulations procedures. Any deviation from these procedures must be approved by the TCEQ Executive Director prior to sampling.

15. Within 180 days of the issuance of this permit amendment, the holder of this permit shall install, calibrate, and maintain continuous emissions monitoring systems (CEMS) to individually measure and record the in-stack concentration of CO, SO2, and TRS from the cupolas and EAF. **(10/98)**

    A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.

    Notification of CEMS certification testing, including a complete test plan, shall be submitted to the appropriate TCEQ Regional Office at least 45 days prior to the scheduled testing.

    B. The system shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable

Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using cylinder gas audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: an independent relative accuracy test audit is not required once every four quarters (i.e., four successive quarterly CGA may be conducted), but is required at least once a year. An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of ∀15 percent accuracy and any CEMS downtime shall be reported to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.

C. The monitoring data shall be reduced to hourly average concentrations at least once every four hours using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every day.

D. All monitoring data and quality-assurance data shall be maintained by the source for a period of two years and shall be made available to the TCEQ Executive Director or his designated representative upon request. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

16. As an alternative to the CEMS requirements in Special Condition No. 15 and upon review and approval of the TCEQ Waco Regional Office, the holder of this permit may implement a Compliance Assurance Monitoring Plan (CAMP) for the purpose of demonstrating compliance with the emissions limits specified in the attached MAERT. **(10/98)**

A. Within 60 days after issuance of the permit amendment to install the EAF, the holder of this permit must submit a CAMP to the TCEQ Waco Regional Office detailing:

(1) The specific operating conditions to be monitored, sampled, and/or recorded;

(2) The theoretical determined relationship between these operating parameters and the emission rates of CO, SO_2, and TRS;

(3) The data and information used to identify the relationship between the emission rates and the operating conditions;

(4) How the operating conditions will be monitored on an hourly, daily, or other period during operation of the facility;

(5) The quality assurance and quality control procedures that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and

(6) The type and format of the operating condition records that will be maintained.

B. The requirements of this plan shall become effective immediately upon start-up of the EAF. The holder of this permit will conduct all baseline testing in support of the CAMP in conjunction with the emissions testing specified in Special Condition No. 13.

An updated plan incorporating the testing results and documenting the determined emissions rates correlations for CO, SO_2, and TRS shall be submitted to the TCEQ within 60 days after completion of the testing.

C. At a minimum, the quality assurance procedures in the plan shall include independent emissions testing, using acceptable EPA Reference Test Methods, to verify the accuracy of the CAMP and previously established emissions rates correlations. The emissions rates predicted by the CAMP shall be greater than or equal to 90 percent of the values obtained through the EPA Reference Method testing if the CAMP is to be used in lieu of the CEMS specified in Special Condition No. 15.

D. After the initial compliance test, as specified in Special Condition No. 13, the holder shall conduct quarterly sampling for the next four consecutive calendar quarters. If the required accuracy, as stated above, is not achieved in any quarter, the permit holder shall make and record the necessary adjustments to bring the predicted emissions within the acceptable range by the next quarterly sampling. If the CAMP cannot be proven to be within the required accuracy limit for two consecutive quarters, the permit holder shall install the CEMS as provided in Special Condition No. 15, within 90 days of the last failed verification test.

If the CAMP provides reliable data throughout four consecutive quarters of testing and provides the accuracy requirement as described above, the testing schedule can be changed to a semi-annual basis. If the CAMP provides reliable data for two consecutive semi-annual periods and provides the accuracy requirement as described above, the testing schedule can be changed to an annual basis. If the CAMP provides reliable data for two consecutive annual periods and provides the accuracy requirement as described above, the testing schedule can be changed to a biennial basis. If the CAMP does not provide reliable data during any of the required sampling periods, the testing schedule shall revert back to a quarterly basis. The schedule of subsequent testing can be adjusted as outlined above. **(06/12)**

An inactive cupola furnace need not be operated solely to conduct the compliance testing. However, it must be tested within 2,190 hours of operation or at the next scheduled sampling period, whichever comes first. **(06/12)**

If the CAMP produces viable data for emissions rates of the stated contaminants, these rates shall be used directly for the determination of compliance with the limits set out in the attached MAERT. Otherwise, a certified CEMS, as specified in Special Condition No. 15, will be used as the tool for continual compliance determination.

Monitoring

17. The holder of this permit shall install, calibrate, and maintain a device to monitor and record the liquid flow rate in the wet scrubber. The monitoring device shall be calibrated in accordance with the manufacturer's specifications and shall be calibrated at least annually and shall be accurate within a range of ± 5% of design liquid flow rate; or ± 2% of span.

    The minimum liquid flow rate shall be maintained at (or above) 245 gallons per minute. The actual liquid flow rate shall be recorded at least once per day. **(6/08)**

18. The holder of this permit may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging times specified, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances in order to avoid reporting deviations. All monitoring data shall be collected in accordance with the requirements specified in 40 CFR § 64.7(c). **(6/08)**

19. The holder of this permit shall perform monthly inspections to verify proper operation of the capture system to verify there are no holes, cracks and/or other conditions that would reduce the collection efficiency of the emission capture system as represented. If the results of the inspections indicate that the capture system is not operating properly, the permit holder shall promptly take necessary corrective actions. **(6/08)**

20. The control device shall not have a bypass. **(6/08)**

21. The TCEQ Regional Office shall be notified as soon as possible after the discovery of any monitor malfunction, which is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the Scrubber (EPN 3) operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit. **(6/08)**

22. The required liquid flow rate monitoring equipment shall be installed, tested, undergo final verification, and begin collecting data within 180 days after issuance of this permit. **(9/08)**

Recordkeeping Requirements

23. In addition to the recordkeeping requirements specified in the general conditions, the following records shall be maintained on-site for a rolling two-year period made available upon request to representatives of the TCEQ or any other air pollution controls program having jurisdiction: **(6/08)**

    A. State which cupola is operating, including date and time.

    B. Hourly charge rates of raw material, fuel, and additives being charged to the cupolas.

    C. Hourly charge rates of raw material, shot, and additives being charged to the EAF.

D. Amount of O_2 injected into the cupolas in standard cubic feet per minute and based on a continuous basis.

E. Amount of sulfur in the raw material and fuel being charged to cupolas and EAF. The amount of sulfur shall be determined for each delivery of raw material and fuel delivered to the plant site. With approval from the TCEQ Regional Director, the frequency of determining sulfur content can be reduced to occur only after a change in the source of raw material. If a CEMS is installed and operated as specified in Special Condition No. 14, sulfur content measurements and recordkeeping are not required.

F. Total production rate of mineral wool in lb/hr.

G. Unloading rates of raw material and fuel from railcars.

H. All monitoring data and support information as specified in 30 TAC §122.144; and

I. Inspections of capture systems and abatement devices shall be recorded as they occur.

Operational Requirements for White Wool Production

24. The holder of this permit is authorized to produce white mineral wool, based on representations made in support of the testing request letter submitted by the holder on January 9, 2002, for the sole purpose of determining the emissions increases, if any, of SO_2 and TRS from the cupolas.

    Each cupola may produce white mineral wool for a total production period not to exceed 24 hours each and documentation of feed rates shall comply with the requirements of Special Condition No. 23. The testing must be completed within six months of the date of this condition and shall be performed in accordance with the requirements specified in Special Condition No. 13.

    The holder of this permit shall keep and maintain records of the total time that white wool is produced from each cupola and make these records available to TCEQ representatives upon request. **(1/02)**

Dated January 22, 2013

Emission Sources - Maximum Allowable Emission Rates

Permit Number 9397 and PSDTX625M1

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (6) *	
			lbs/hour	TPY
2	Electric Arc Furnace or Cupola 1 or Cupola 2	PM_{10}	3.24	14.30
		NO_x	12.85	52.06
		CO	1477.00	4800.40
		SO_2	149.81	487.80
		HF	0.57	2.10
		H_2S	15.70	57.60
		COS	19.87	75.82
		TRS	35.57	133.42
		HCN	< 0.01	0.03
2	Electric Arc Furnace or Cupola 1 or Cupola 2 (5)	SO_2	203.38	--
		TRS	48.29	--
3	Scrubber	PM_{10}	21.20	80.90
		VOC	0.05	0.22
4	Material Handling (includes stockpiles)	PM	1.00	0.70
		PM_{10}	0.47	0.38
5	Cupola Building Fugitives	PM_{10}	< 0.01	< 0.01
		NO_x	< 0.01	< 0.01
		CO	0.15	0.47
5	Cupola Building Fugitives	SO_2	< 0.01	0.04
		HF	< 0.01	< 0.01
		H_2S	< 0.01	< 0.01
		COS	< 0.01	< 0.01
		TRS	< 0.01	0.01

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (6) *	
			lbs/hour	TPY
		HCN	< 0.01	< 0.01
6	Oil Storage Tank	VOC	1.82	< 0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code Section 101.1
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
NO_x - total oxides of nitrogen
CO - carbon monoxide
SO_2 - sulfur dioxide
HF - hydrogen fluoride
H_2S - hydrogen sulfide
COS - carbonyl sulfide
TRS - total reduced sulfur
HCN - hydrogen cyanide
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) Each cupola is authorized to produce white mineral wool, which uses feldspar instead of trap rock, for a total of 24 hours, for the sole purpose of determining the emission increases, if any, of SO_2 and TRS.
(6) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

Hrs/day 24 Days/week 7 Weeks/year 52

Date: January 22, 2013